

Patent claims:

1. A method for cultivating microorganisms of the genus *Thraustochytriales*, characterized in that the microorganisms are cultivated in a fermentation medium with no more than a minor addition of other pH-stabilizing means apart from CaCO₃, preferably without adding other pH-stabilizing means apart from CaCO₃.
2. The method according to claim 1, wherein the microorganisms bring forth a production of more than 25, preferably of more than 35 and very particularly preferably of more than 45 wt% oil per unit of weight of dry biomass.
3. The method according to claim 1, wherein the microorganisms bring forth a production of more than 10, preferably of more than 14, particularly preferably of more than 18, and very particularly preferably of more than 22 wt% DHA per unit of weight of dry biomass.
4. The method according to any one of the preceding claims, wherein the microorganisms bring forth a production of more than 1 %, preferably more than 2 %, particularly preferably more than 3 % and very particularly preferably more than 4 % DPA per dry biomass.
5. The method according to claim 1 or 2, wherein 3 g/L to 15 g/L, preferably 4 g/L to 12 g/L, particularly preferably 5 g/L to 10 g/L and very particularly preferably 7.5 ± 0.5 g/L CaCO₃ are added to the medium.
6. The method according to claims 1 to 5, characterized in that the medium comprises glucose, corn steep liquor, magnesium chloride, calcium chloride, calcium carbonate, sodium sulfate, ammonium sulfate and potassium hydrogen phosphate.
7. The method according to any one of the preceding claims, characterized in that the medium has a pH value of between 3 and 10, preferably of between 5 and 7.

8. The method according to any one of the preceding claims, characterized in that the cultivation takes place between 10°C and 40°C, preferably between 25°C and 35°C.
9. The method according to any one of the preceding claims, characterized in that the cultivation takes place for 1 to 10 days, preferably for 3 to 9 days.
10. The method according to any one of the preceding claims, characterized in that the microorganism belongs to the genus *Schizochytrium*, *Thraustochytrium* or *Ulkenia*.
11. The method according to any one of the preceding claims, characterized in that the microorganism is *Ulkenia* sp. SAM 2179.
12. The method according to any one of the preceding claims, characterized in that the microorganism is *Schizochytrium* sp. SR 21.
13. Utilization of a culture medium comprising exclusively CaCO₃ as pH stabilization means for cultivating microorganisms of the order *Thraustochytriales*.
14. Oil having a content of at least 20 area(%) DHA, preferably at least 30 area(%) DHA and particularly preferably at least 40 area(%) DHA, produced using a method according to any one of the claims 1 to 12 and subsequent isolation of the oil from the culture broth and/or the biomass available therein.
15. Oil having a content of at least 3 area(%) DPA, preferably at least 6 area(%) DPA and particularly preferably at least 9 area(%) DPA, produced using a method according to any one of the claims 1 to 12 and subsequent isolation of the oil from the culture broth and/or the biomass available therein.

16. DHA of at least 90 % purity, produced using a method according to any one of the claims 1 to 12 and subsequent isolation of the DHA from the culture broth and/or the biomass available therein.
17. DPA of at least 90 % purity, produced using a method according to any one of the claims 1 to 12 and subsequent isolation of the DPA from the culture broth and/or the biomass available therein.
18. Biomass obtainable by means of a method according to any one of the claims 1 to 12 and subsequent separation of the biomass from the culture broth.
19. Animal feed comprising biomass according to claim 18.
20. Foodstuff for human nutrition comprising biomass according to claim 18.